

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-15. (canceled)

16. (currently amended) A semiconductor interconnect structure comprising:

a substrate;

a first insulating film directly on said substrate;

a first interconnect through said first insulating film and directly contacting said substrate, said first interconnect comprising a trench having a metal barrier layer on walls and a bottom of said trench and a copper layer within said trench;

a first diffusion barrier film directly on said first insulating film, said first diffusion barrier film suppressing aggregation of copper and preventing diffusion of copper;

a second diffusion barrier film directly on said first diffusion barrier film, said second diffusion barrier film being an etch stop layer;

a second insulating film directly on said second diffusion barrier film; and

a second interconnect through said first and second diffusion barrier films and said second insulating film, said second interconnect comprising a trench having a metal barrier

layer on walls and a bottom of said trench and a copper layer within said trench.

17. (previously presented) The interconnect structure as claimed in claim 16, wherein said first and second interconnects are axially aligned.

18. (previously presented) The interconnect structure as claimed in claim 16, wherein said first diffusion barrier film and said bottom of said second interconnect are coplanar.

19. (previously presented) The interconnect structure as claimed in claim 16, wherein said bottom of said second interconnect contacts said walls of said first interconnect.

20. (previously presented) The interconnect structure as claimed in claim 16, wherein said first and second diffusion barrier films are different.

21. (previously presented) The interconnect structure as claimed in claim 16, wherein said first and second diffusion barrier films are the same and have different thicknesses.

22. (previously presented) The interconnect structure as claimed in claim 16, wherein the metal barrier layer on the walls of the first interconnect and the metal barrier layer on the walls of the second interconnect are aligned.

23. (new) The interconnect structure as claimed in claim 16, wherein a bottom of said metal barrier layer of said first interconnect directly contacts an end of said walls of said metal barrier layer of said second interconnect.